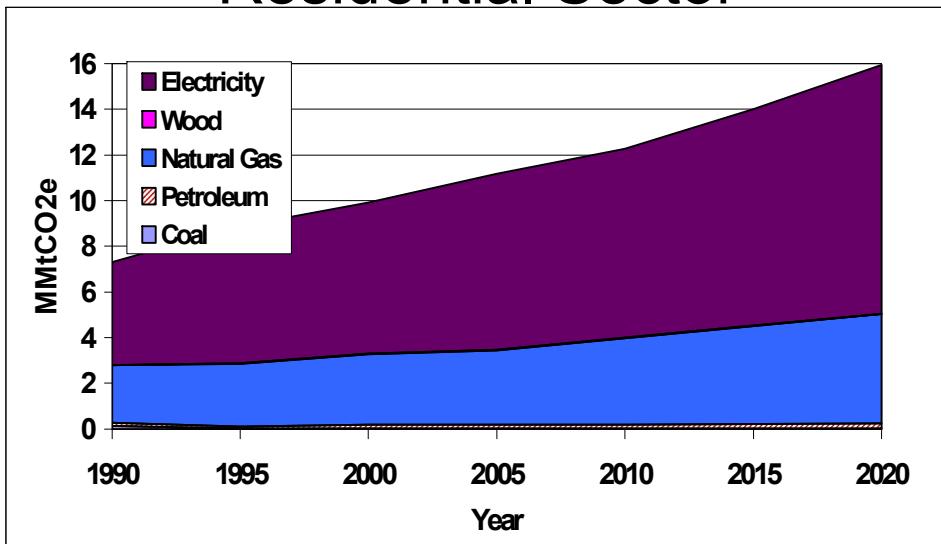


2000 OERP Report: Background

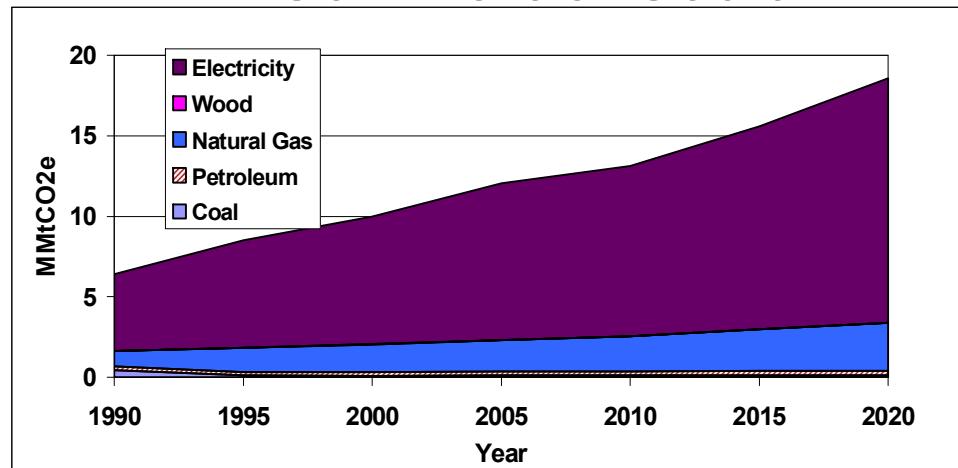
- 1996 EPA grant:
 - Phase I: Utah Division of Air Quality (DAQ) - GHG Inventory (1997)
 - Phase II: Office of Energy and Resource Planning (OERP) – GHG Mitigation Strategies (2000)
 - Refined Phase I GHG Inventory
 - Identified GHG mitigation strategies
 - Determined GHG reduction associated with each strategy
 - Assessed economic impact of select strategies

2007 Pechan Inventory: Residential & Commercial

Residential Sector

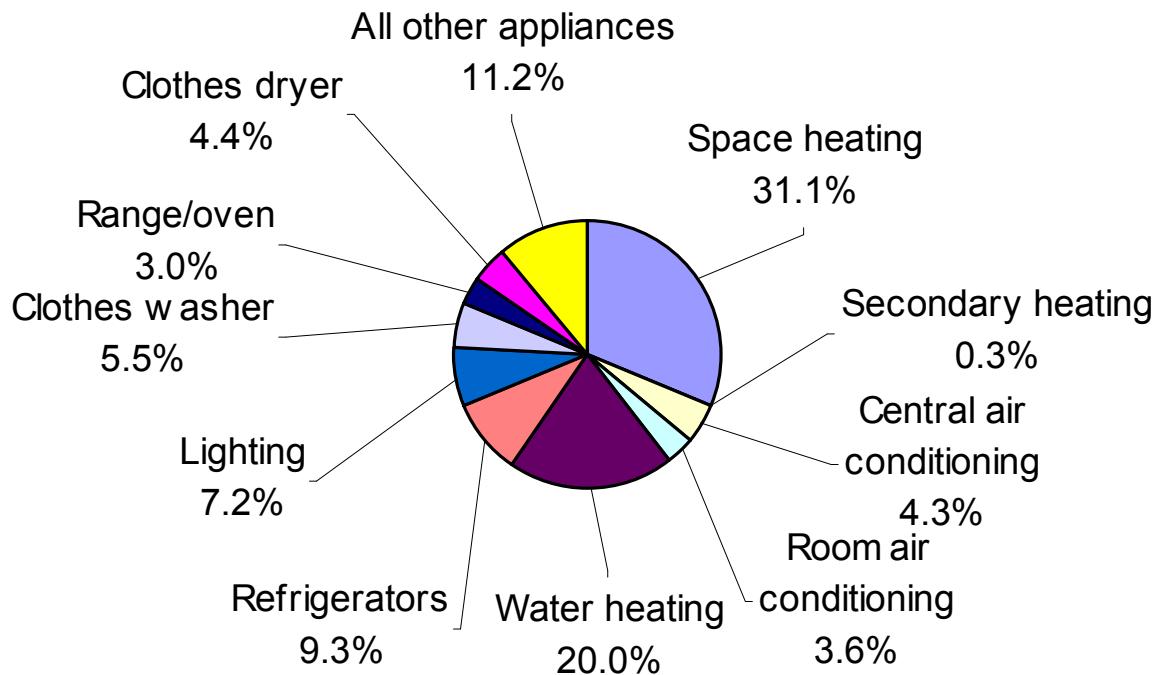


Commercial Sector



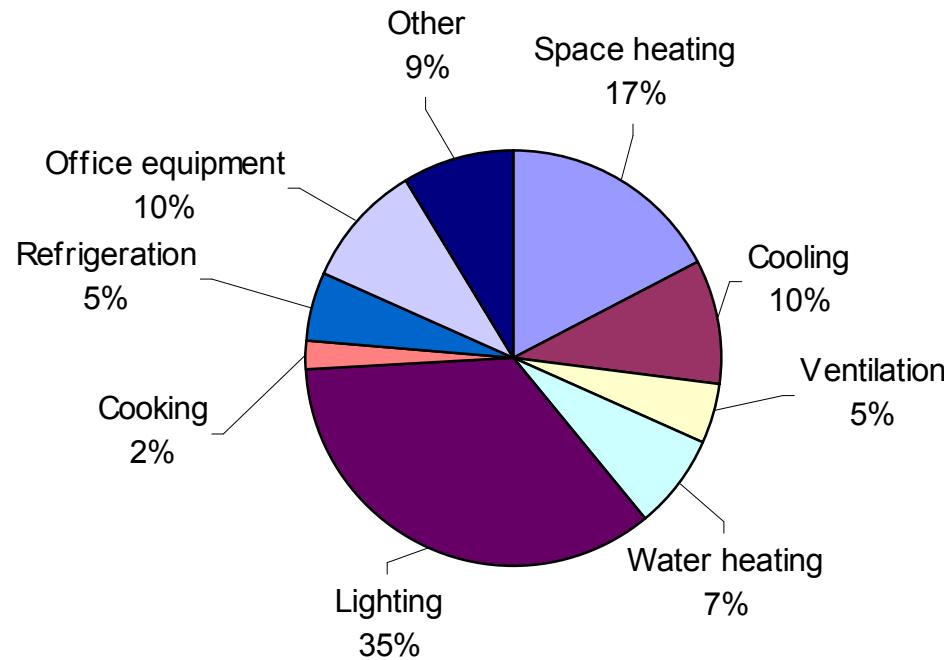
2000 OERP Inventory: Residential CO₂e emissions by activity

Utah Residential CO₂e Emissions by Activity (1998)



2000 OERP Inventory: Commercial CO₂e emissions by activity

Utah Commercial CO₂e Emissions by Activity (1998)



GHG Reductions: Feasible vs. Potential

- Feasible: the likely reduction expected based on assumptions about market penetration and political/institutional acceptance
- Potential: assumes no significant barriers to adoption; represents the maximum amount of reduction possible

Cost estimates

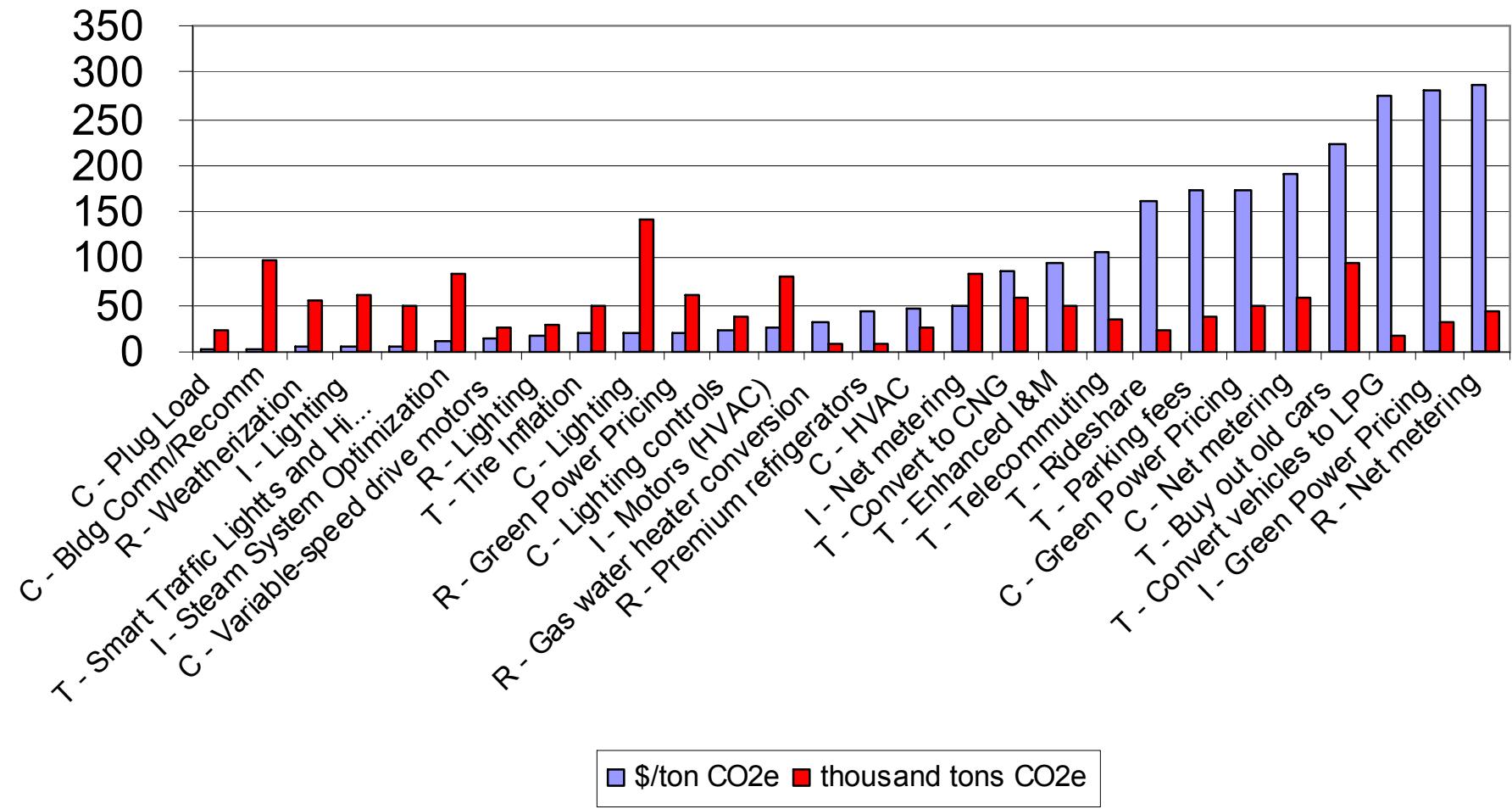
- Annualized cost over a 30-year period per ton of annual CO₂e reduction
- Assumed a 5% discount rate
- Savings are not included
 - Savings would likely be greater than costs for some strategies (e.g. energy efficiency)
- Social costs/benefits are not included

Summary: average reduction potential and cost by sector

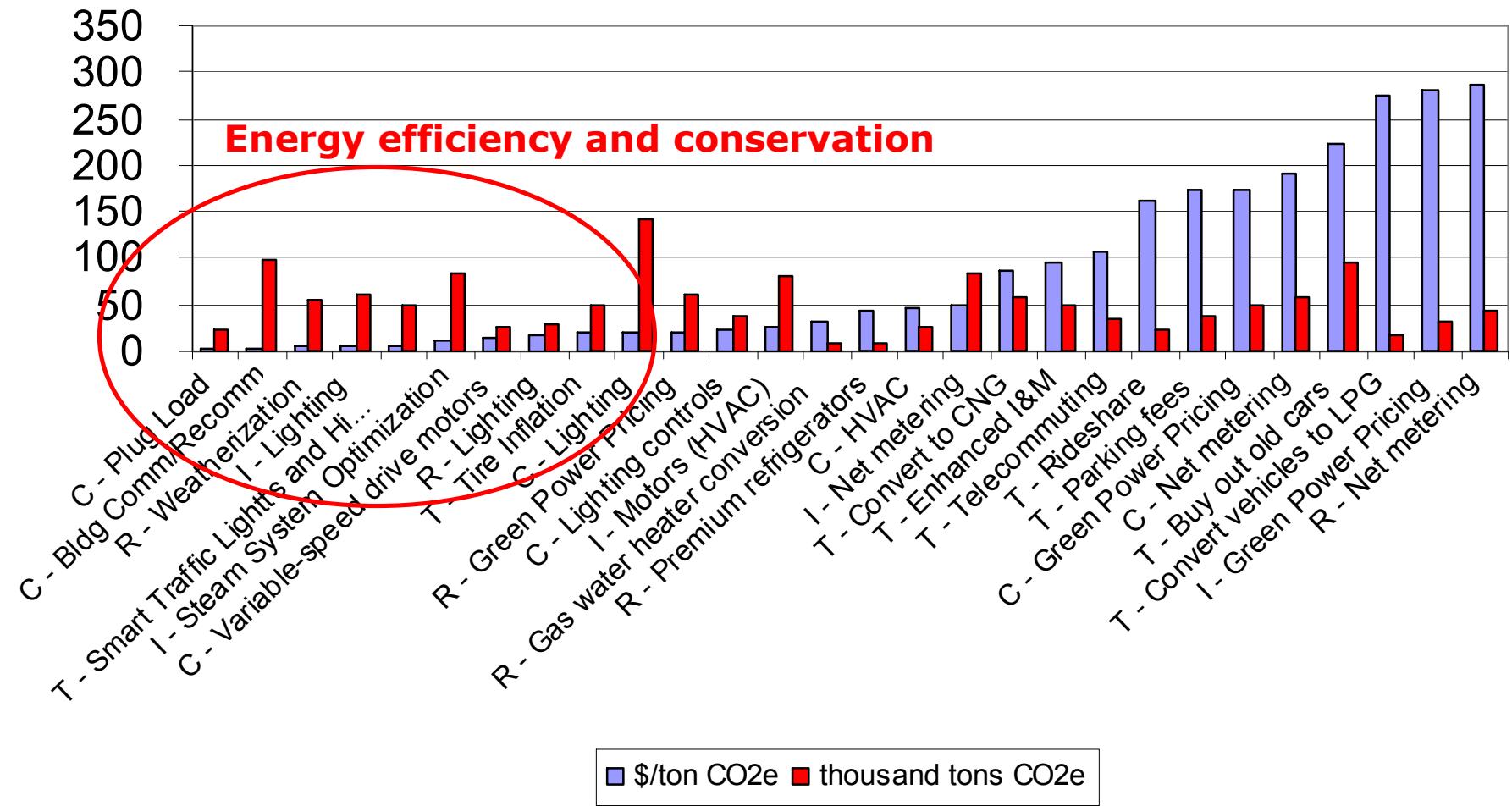
Strategy	Feasible mmtons CO2e	Potential mmtons CO2e	Feasible \$/ton CO2e	Potential \$/ton CO2e
Residential*	0.209	1.043	\$72.69	\$37.57
Commercial*	0.458	2.498	\$60.80	\$26.53
Industrial*	0.340	0.646	\$49.20	\$46.94
Transportation	1.728	3.161	\$150.61	\$97.77
Total	2.735	7.348	\$83.33	\$52.20

*Includes emissions from electricity consumption

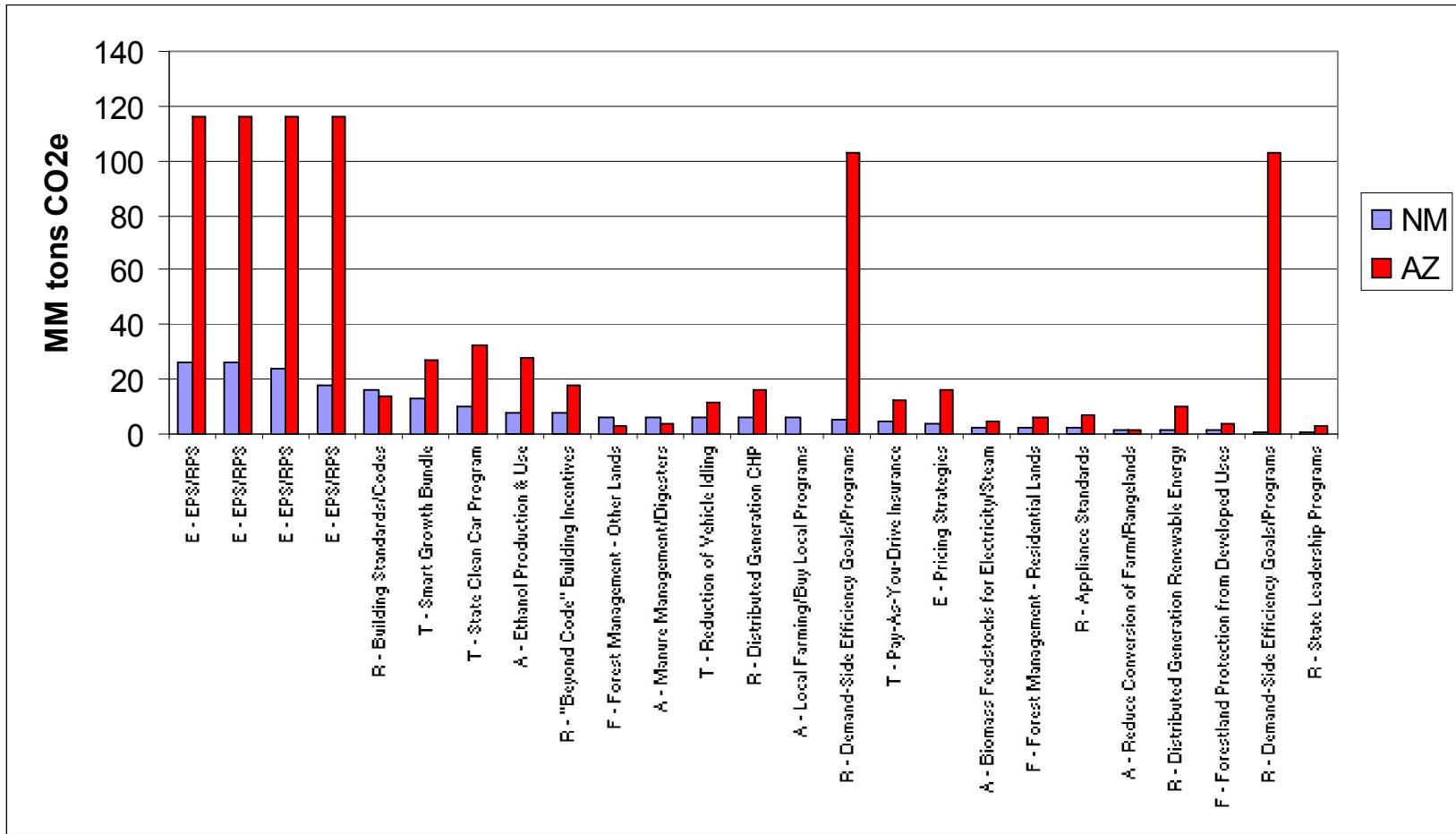
2000 OERP: Feasible reductions and cost by strategy



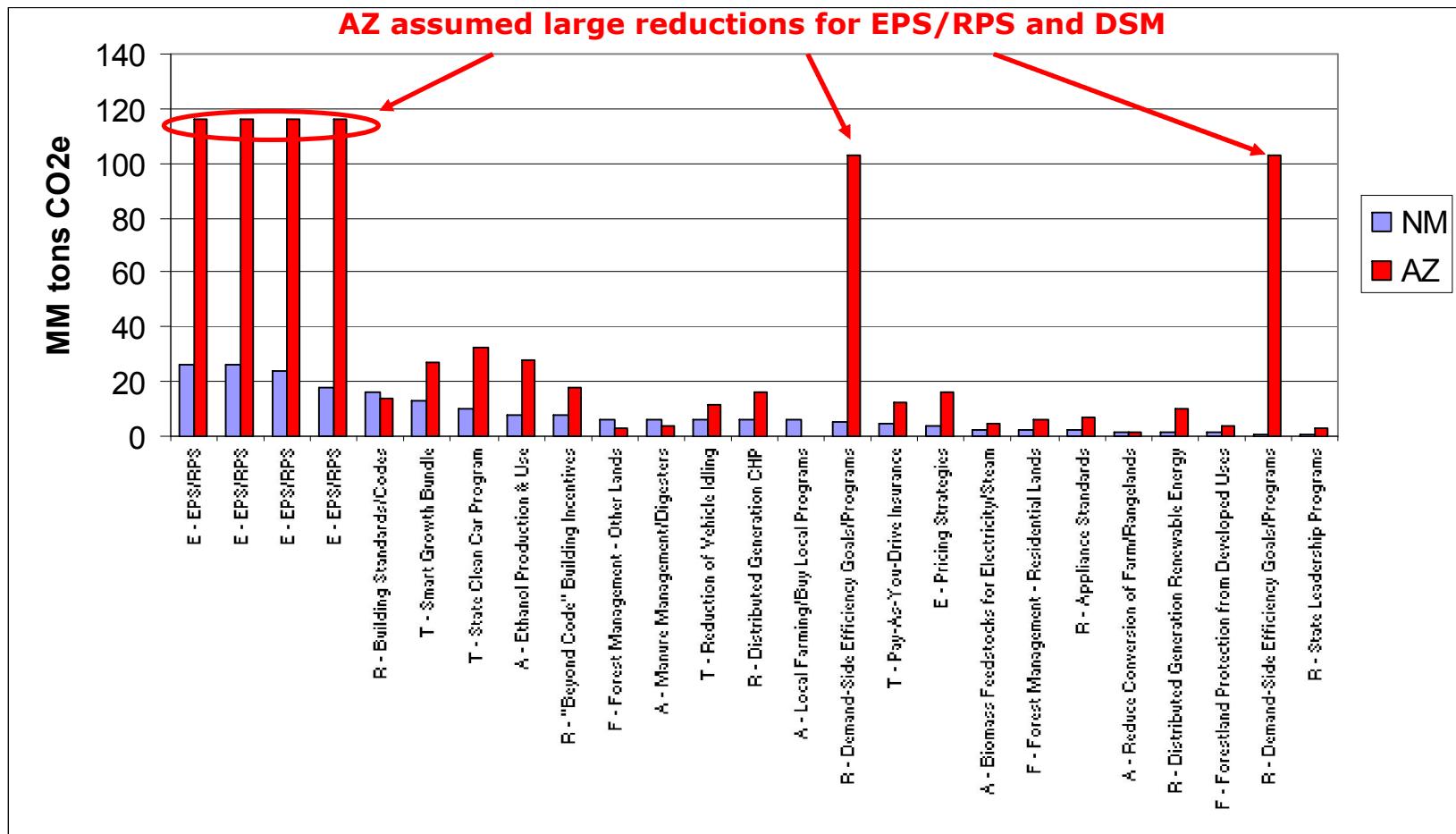
2000 OERP: Feasible reductions and cost by strategy



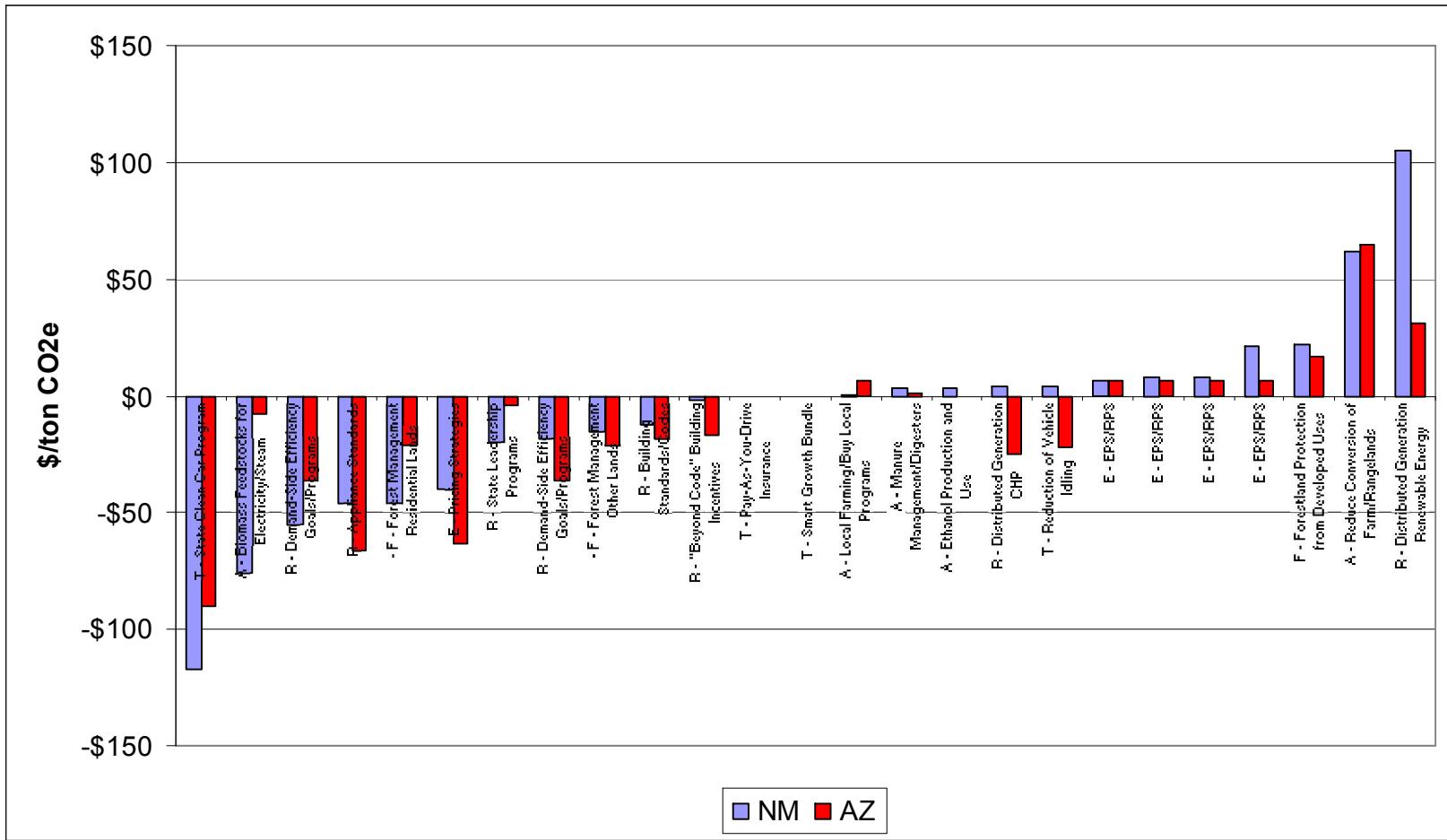
NM & AZ: Reduction



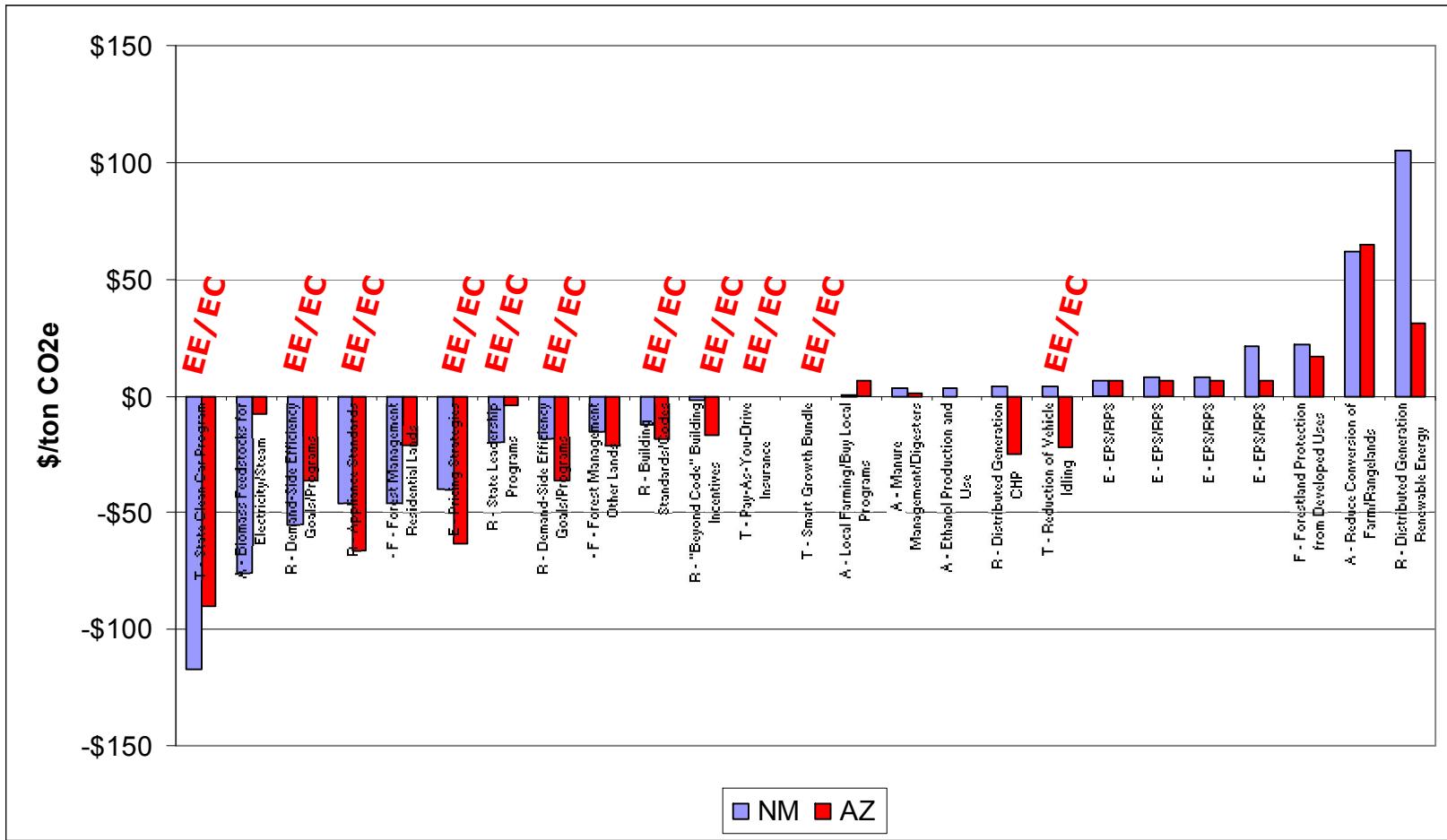
NM & AZ: Reduction



NM & AZ: Cost



NM & AZ: Cost



Economic impact of select RCI strategies

- 4 residential sector
- 6 commercial sector
- 3 industrial sector
- 0.678-3.530 mmtons CO2e reduced

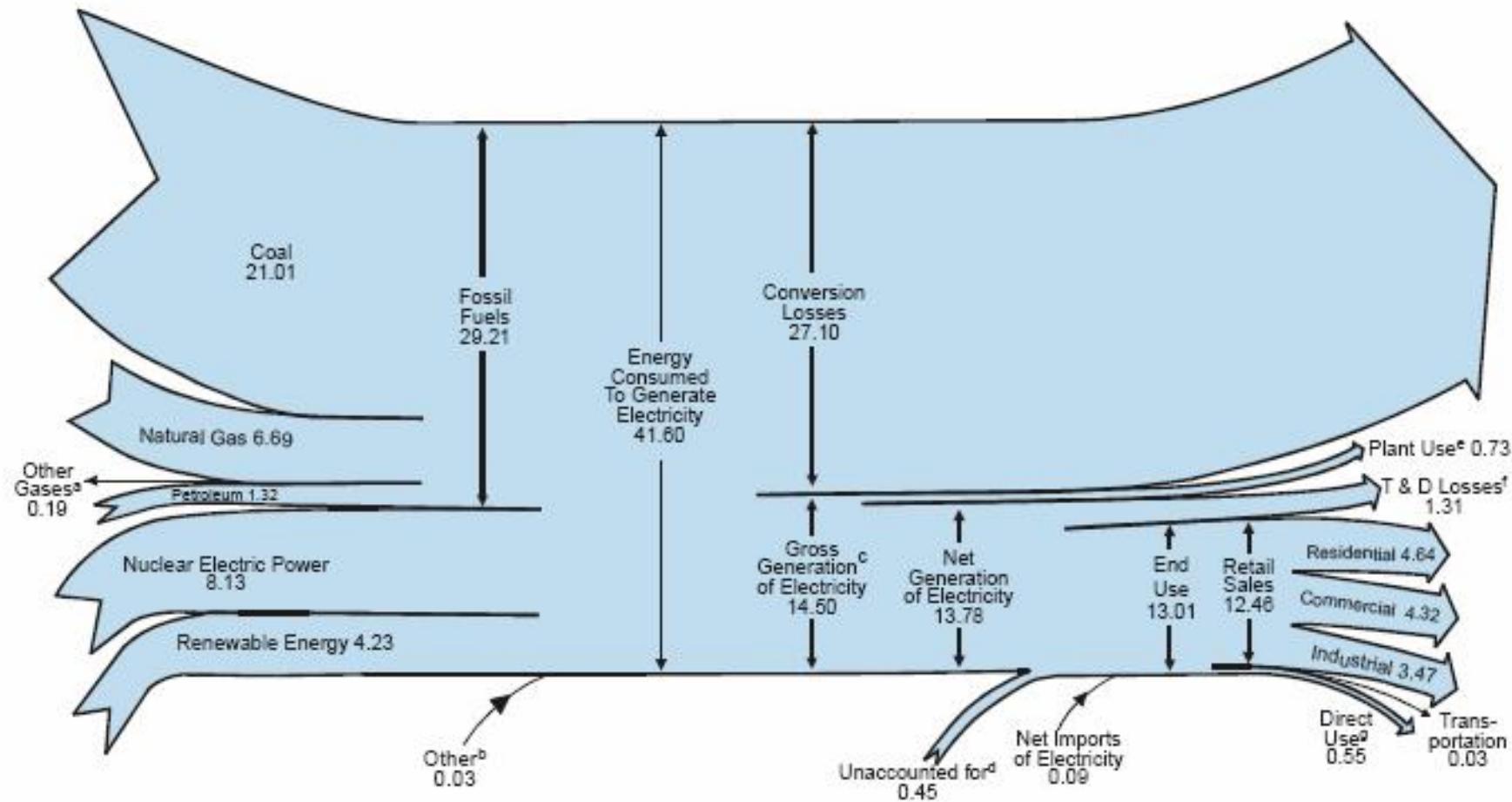
Scenario	Change in Earnings (thousand \$)	Change in Earnings (%)	Change in Employment (jobs)	Change in Employment (%)
Feasible	\$8,561	0.03%	482	0.04%
Potential	\$24,058	0.08%	1,623	0.15%

Questions?



U.S. Electricity flows and losses

Diagram 5. Electricity Flow, 2005
(Quadrillion Btu)



2000 OERP Inventory: Residential CO₂e emissions by activity

Activity	Electricity	Electric Losses	Natural Gas	All Other Fuels	Total
Space heating	211	439	2,133	242	3,025
Secondary heating	10	20	-	-	30
Central air conditioning	137	285	-	-	422
Room air conditioning	113	236	-	-	349
Water heating	252	524	1,170	4	1,950
Refrigerators	295	614	-	-	909
Lighting	227	472	-	-	699
Clothes washer	174	362	-	-	536
Range/oven	64	134	69	21	288
Clothes dryer	117	244	69	-	430
All other appliances	354	736	-	-	1,090
Total	1,954	4,066	3,441	267	9,728

2000 OERP Inventory: Commercial CO₂e emissions by activity

Activity	Electricity	Electric Losses	Natural Gas	All Other Fuels	Total
Space heating	107	223	1,054	379	1,763
Cooling	329	685	-	-	1,014
Ventilation	157	326	-	-	483
Water heating	45	95	503	126	769
Lighting	1,163	2,420	-	-	3,583
Cooking	18	38	191	-	247
Refrigeration	176	366	-	-	542
Office equipment	323	672	-	-	995
Other	204	425	130	126	885
Total	2,522	5,250	1,878	631	10,281